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**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

LEONA HUNTER and ANNE MARIE VILLA,  
on behalf of themselves and all others similarly  
situated,

Plaintiffs,

v.

TIME WARNER CABLE INC.,

Defendant.

Case No. 1:15-cv-06445-JPO

**DECLARATION OF RANDALL A.  
SNYDER**

**DECLARATION OF RANDALL A. SNYDER**

I, Randall A. Snyder, hereby declare as follows:

1. My name is Randall A. Snyder. I am an adult over the age of 18 and a resident of the state of Nevada. I have personal knowledge of each of the matters stated herein, and if called to testify, I could and would testify competently about them.

2. I am an independent telecommunications technology consultant and I reside at 8113 Bay Pines Avenue, Las Vegas, Nevada, 89128. I have been retained by Bursor & Fisher, P.A. in the matter *Hunter v. Time Warner Cable Inc.* No. 1:15-cv-06445-JPO (S.D.N.Y.) to provide my opinions relating to technology described within the Telephone Consumer Protection Act, 47 U.S.C. § 227, *et seq.* (“TCPA”). In particular, I have been asked to determine whether Time Warner Cable Inc. (“TWC” or Defendant”) operated equipment which has the capacity to store or produce telephone numbers to be called, using a random or sequential number generator, or from a list or database of numbers, and to dial such numbers. In addition, I have been asked to provide my opinions relating to data analysis capabilities regarding telephone numbers.

3. My [REDACTED]

[REDACTED] in this case: First Amended Class  
Action Complaint; Defendant Time Warner Cable Inc.’s Responses to Plaintiffs’ First Requests

1 for Admissions; Defendant Time Warner Cable Inc.'s Responses to Plaintiffs' First Set of  
2 Interrogatories; Defendant Time Warner Cable Inc.'s Supplemental Responses to Plaintiffs' First  
3 Set of Interrogatories; Defendant Time Warner Cable Inc.'s Responses to Plaintiffs' Request for  
4 Production of Electronically Stored Information ("ESI") and Documents; Defendant Time  
5 Warner Cable Inc.'s Memorandum of Law in Support of its Motion for Summary Judgment;  
6 Defendant Time Warner Cable Inc.'s Statement of Material Facts Pursuant to Rule 56.1; King v.  
7 Time Warner Cable, 113 F.Supp.3d 718, No. 14 Civ.2018(AKH); Deposition Transcript of  
8 David Zitko (King v. Time Warner Cable); [REDACTED]

9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
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16 [REDACTED]  
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19 [REDACTED]  
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28 [REDACTED]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED] the Telephone  
5 Consumer Protection Act, 47 U.S.C. § 227, *et seq.* (“TCPA”) and regulations promulgated  
6 thereunder; the Federal Communications Commission’s (“FCC”) Report and Order in the Matter  
7 of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991 dated  
8 October 16, 1992; the FCC’s Report and Order in the Matter of Rules and Regulations  
9 Implementing the Telephone Consumer Protection Act of 1991 dated July 3, 2003; the FCC’s  
10 Declaratory Ruling in the Matter of Rules and Regulations Implementing the Telephone  
11 Consumer Protection Act of 1991 Request of ACA International for Clarification and  
12 Declaratory Ruling dated January 4, 2008; the Appeal from the United States District Court for  
13 the Northern District of California, No. 07-16356, D.C. No. CV-06-02893-CW Opinion, filed  
14 June 19, 2009; the FCC’s Report and Order in the Matter of Rules and Regulations  
15 Implementing the Telephone Consumer Protection Act of 1991 dated February 15, 2012; the  
16 FCC’s Notice of Proposed Rulemaking in the Matter of the Middle Class Tax Relief and Job  
17 Creation Act of 2012, Establishment of a Public Safety Answering Point Do-Not-Call Registry  
18 dated May 22, 2012; the FCC’s Declaratory Ruling in the Matter of Rules and Regulations  
19 Implementing the Telephone Consumer Protection Act of 1991, SoundBite Communications,  
20 Inc. Petition for Expedited Declaratory Ruling dated November 29, 2012; and the FCC’s  
21 Declaratory Ruling in the Matter of Rules and Regulations Implementing the Telephone  
22 Consumer Protection Act of 1991 dated July 10, 2015.

23 4. I have over 30 years of experience in telecommunications network architecture,  
24 system architecture, engineering, design and technology. I am an expert in the fields of both  
25 wireline and wireless telecommunications networking technology. I have been retained by both  
26 plaintiffs and defendants as a testifying or consulting expert in over 135 cases regarding cellular  
27 telecommunications technology, including nearly 100 TCPA cases.

28 5. I have taught many classes and seminars on both wireline and wireless

1 telecommunication network technologies and have been a panelist and speaker at numerous  
2 conferences at the Institute of Electrical and Electronics Engineers (“IEEE”), the Personal  
3 Communication Society (“PCS”), and the Cellular Telecommunications and Internet Association  
4 (“CTIA”). I spent seven years developing standards within the American National Standards  
5 Institute’s (“ANSI”) subsidiary organization, the Telecommunications Industry Association  
6 (“TIA”), providing technical contributions and authoring and editing telecommunications  
7 proposed standards. Most notably, I authored and oversaw the standardization of Interim  
8 Standard 93, providing interconnection technology between wireline and wireless networks,  
9 which is a fully accredited national standard of the American National Standards Institute  
10 (“ANSI”).

11 6. I am the co-author of the McGraw-Hill books “Mobile Telecommunications  
12 Networking with IS-41,” and “Wireless Telecommunications Networking with ANSI-41, 2nd  
13 edition” published in 1997 and 2001, respectively. I have 29 patents on telecommunications  
14 networking technology and currently have five additional published patents pending. I have also  
15 authored several articles on telecommunications technology and have been frequently quoted in  
16 industry trade publications. I have consulted for the CTIA and many wireline and wireless  
17 telecommunications companies, including IBM, Bell Laboratories, McCaw Cellular, AirTouch,  
18 AirTouch International, AT&T Wireless, AT&T Mobility, Lucent, Nokia, Ericsson, Motorola,  
19 Samsung, Siemens, Nextwave, MCI, Daewoo, Globalstar, T-Mobile, Sprint, U.S. Cellular,  
20 Telelobe Canada, Teledesic and other telecommunications technology vendors and service  
21 providers. I was also nominated in 2006 for a National Television Arts Emmy Award for  
22 Outstanding Achievement in Advanced Media Technology for unique wireless content  
23 distribution technology I designed while employed at Entriq, Inc.

24 7. Additional details, including authored publications within at least the past ten years,  
25 are provided in my attached *curriculum vitae* (a true and correct copy of which is attached hereto  
26 as Exhibit A) along with a list of cases where I served as a testifying or consulting expert and my  
27 standard rate sheet. I am being compensated at the rate of \$475 per hour for my study, analysis  
28 and testimony in this case.

8. I understand that fact discovery in this case is ongoing and I also understand that there may be documents and/or evidence that have yet to be produced. To the extent that I cannot currently opine on the technical issues in this case, I hereby reserve the right to supplement this Declaration with both my conclusions and opinions in a detailed and additional supplementary declaration in the future.

## INTRODUCTION

9. It is my understanding that the TCPA defines an automatic telephone dialing system (“ATDS”) as “equipment which has the capacity – (i) to store or produce telephone numbers to be called, using a random or sequential number generator; and (ii) to dial such numbers.” Additionally, it is my understanding that the Federal Communications Commission (“FCC”) has issued regulations that also define an ATDS as including the capacity to dial telephone numbers from a provided list or database of telephone numbers without human intervention.

10. Based on my review of the relevant documents and the facts described above, it is my opinion that the Defendant utilized equipment which has the capacity to store or produce telephone numbers to be called, using a random or sequential number generator, or from a list or database of numbers, and to dial such numbers without human intervention. I base this opinion on my knowledge, education, experience, expertise, training and on the evidence I have reviewed.

11. Furthermore, based on my knowledge, education, experience, expertise and training, it is my opinion that telephone numbers can be determined to be either cellular or landline telephone numbers and the ability to do so is a commonly-practiced and straightforward administrative process.

12. In addition, based on my knowledge, education, experience, expertise and training, it is my opinion that telephone numbers can be determined to have been reassigned at some time in the past and the ability to do so is a commonly-practiced and straightforward administrative process.

13. Moreover, based on my knowledge, education, experience, expertise and training, it is my opinion that current contact information about individuals can be clearly and definitively

1 ascertained based solely on a telephone number and the ability to do so is a commonly-practiced  
2 and straightforward administrative process.

### 3 TELEPHONE NUMBER DIALING

4 14. To make landline telephone calls using a traditional rotary dial telephone, a caller  
5 first lifts the receiver of the telephone handset, causing an off-hook signal to be sent directly to a  
6 “switching system” as the access point within the aptly named public switched telephone  
7 network (“PSTN”). The switching system residing within the PSTN responds to the telephone  
8 handset with an audible dial tone signal informing the caller that it is now ready to receive dialed  
9 telephone number digits. The caller then places a finger in one of ten finger holes marked 0  
10 through 9 around the circumference of the dial and rotates the dial in an increasingly progressive  
11 circular distance to provide an increasingly higher voltage pulse signal. Each of the ten distinct  
12 dial pulse signals, based on the distinct voltage per the distance the dial is rotated, represents  
13 each of the digits symbolized by a telephone number. When the switching system receives the  
14 first digit of the called party telephone number, it disconnects the dial tone and registers that  
15 digit. After the remaining digits (dial pulse signals) of the telephone number are sent from the  
16 handset, the switching system residing in the PSTN sets up a particular outbound telephone  
17 channel to establish a call to the party represented by the dialed digits. The PSTN represents the  
18 conglomerate of telephone carrier networks that enable calls to be made from one party within a  
19 particular carrier network to any other party in any other carrier network.

20 15. In the early 1960s, dual tone multifrequency (“DTMF”) dialing—commonly known  
21 as TouchTone™ dialing—was introduced and used as the method to transmit telephone number  
22 digits into the PSTN from a telephone handset. To make landline telephone calls using a DTMF  
23 phone, a caller pushes one of ten buttons, each button representing a telephone number digit  
24 marked 0 through 9. Each of ten distinct audio tone signals are generated from the handset when  
25 the corresponding button representing a digit of a telephone number is pushed. These distinct  
26 audio tone signals communicate directly with the telephone network in a similar manner to dial  
27 pulse signals. The process for establishing a call using DTMF dialing is essentially the same as  
28 rotary pulse dialing except that each digit of the telephone number is transmitted directly to the

1 PSTN using special audio tone frequencies rather than voltage pulses. The caller simply presses  
2 a button on the handset to transmit the corresponding unique audio tone frequency representing  
3 the telephone number digit.

4 16. Both of these dialing methods (*i.e.*, rotary dial pulse signals and push-button audio  
5 tone signals) used for making landline telephone calls are known as *post-origination* dialing. To  
6 make a call from a landline telephone, the initial off-hook signal and corresponding dial tone  
7 response establishes an open connection to the PSTN. These two methods are called post-  
8 origination dialing because the digits of the telephone number are provided by the calling party  
9 directly, and one at a time, *after* a connection has already been originated and established  
10 between the telephone handset and the PSTN. The described post-origination dialing methods  
11 used to initiate calls from a landline telephone are the only two signaling methods used to  
12 transmit telephone number digits to the PSTN to establish calls.

13 17. Computerized telephone dialing systems used to initiate automatic calls *en masse*  
14 are based on this fundamental landline dialing protocol. In some cases, internet-based telephony  
15 systems use alternative dialing protocols; however this typically occurs only when the switching  
16 system access point within the PSTN (*i.e.*, the carrier) supports direct internet protocol access  
17 dialing.

18 18. The term “dial” has become a common colloquial verb in our lexicon to mean  
19 initiating a telephone call by sending signals representing telephone number digits directly into  
20 the PSTN to originate a call.

21 19. Some medium-to-large businesses require more extensive telecommunications  
22 capabilities due to serving many employees making and receiving calls within the business.  
23 These enterprises may maintain their own small computerized switching system residing at the  
24 business and known as a private branch exchange (“PBX”). A PBX switch connects directly to  
25 the external PSTN just like a basic landline telephone handset does; the primary difference being  
26 that it supports multiple and aggregated landline telephone channels that connect directly to the  
27 PSTN. A PBX can support multiple simultaneous outbound calls from within the business to  
28 parties being contacted outside the business that can only be reached via the PSTN.

1           20.     Among the functions that a PBX provides to callers within the business is automatic  
2     outbound dialing of telephone numbers using dial pulse signals and DTMF signals so that calls  
3     can be initiated into the PSTN. In many cases, the PBX performs the actual outbound dialing of  
4     telephone numbers that can be sent to it in various ways, such as from a software-based  
5     computer application.

6           21.     For example, internet-based telephone systems may or may not connect directly to  
7     the PSTN to make and receive calls. This is because the PSTN is a “circuit-switched” network  
8     and does not always support the architecture, technology and protocols for internet-based  
9     “packet-switched” data networks. Internet-based telephone systems are inherently incompatible  
10    with the technology used to establish and complete calls via the PSTN. Hence, a specialized  
11    PBX is used to perform the actual telephone number signaling in order to automatically dial and  
12    establish PSTN calls when a telephone number is passed to it as a simple data message via a  
13    software application.

#### 14                   **AUTOMATIC TELEPHONE DIALING FUNCTIONS**

15          22.     Automatic telephone dialing systems used by companies that perform  
16    telemarketing, information surveys and debt collection services typically fall into several  
17    fundamental types of computerized telephone number dialing: *preview* dialing, *basic* automatic  
18    dialing, *predictive* dialing, *unattended message* dialing and *manual* dialing. Note that telephone  
19    numbers to be dialed using these dialing functions are organized as “campaigns.” A campaign is  
20    simply an electronic list of telephone numbers organized by some defined criteria that are to be  
21    called for a specific purpose. Each distinct campaign calls the telephone numbers in the list using  
22    the same dialing method, which is defined within the campaign setup parameters.

23          23.     Preview dialing is a method for dialing individual telephone numbers by call center  
24    agents. When preview dialing is used, each individual call center agent can “preview” a  
25    computerized call record and has the ability to originate a call to the consumer. For example, the  
26    call center agent may be able to enter the individual digits of a full 10-digit telephone number.  
27    The entered digits are sent as a message into the automatic dialing system to be subsequently  
28    dialed by the system. Furthermore, the call center agent can “invoke” the automatic sending of



1 all the individual digits of the telephone number into the system at one time without entering the  
2 individual digits. The telephone number to be called may be displayed on the computer screen  
3 and the call center agent sends the digits into the automatic dialing system by clicking the  
4 displayed number itself or, for example, by clicking a “submit” button for the displayed  
5 telephone number. This sends a message containing the entire telephone number into the  
6 automatic dialing system to be subsequently dialed by the system. In addition, sometimes  
7 preview dialing can be fully automated. This automation is sometimes known as “timed preview  
8 dialing.” Timed preview dialing automatically processes the next telephone number in the list  
9 once the agent has concluded a call. The next telephone number to be called is processed at some  
10 predefined time limit, for example 90 seconds. If the agent does not call the next number within  
11 90 seconds, the preview dialing system automatically processes the next telephone number in the  
12 list. This mechanism is typically used to maximize the number of calls made and to ensure call  
13 center agents are moving quickly through their call record list.

14 24. Basic automatic dialing (sometimes known as “progressive dialing,” “power  
15 dialing” or “war dialing”) is a computerized method for automatically dialing lists of telephone  
16 numbers commonly used in call center operations. Basic automatic dialing is a type of automatic  
17 telephone dialing whereby the equipment initiates outbound telephone calls for sales,  
18 telemarketing, collections, information surveys or other purposes. Using this very basic type of  
19 automatic dialing, the computerized system dynamically regulates the number of calls to be  
20 automatically dialed by maintaining a simple balance among the number of call center agents  
21 currently available, the number of calls currently in progress and the “dial ratio.” The dial ratio is  
22 simply the ratio of telephone lines configured per call center agent involved in a particular  
23 calling campaign. Using this basic mechanism, the number of automatic outbound telephone  
24 calls to be dialed by the computer system can be dynamically regulated (*i.e.*, increased or  
25 decreased) over time simply based on the number of calls in progress, the number of agents and  
26 the number of telephone lines available per agent. Basic automatic dialing can sometimes use an  
27 interactive voice response (“IVR”) system, whereby an artificial or prerecorded voice message is  
28 used to communicate with the called party and computerized prompts may be used to enable the

1 called party to provide responses. The artificial or prerecorded voice messages are recorded  
2 before the calling campaign is executed and are stored in audio files that are configured as part of  
3 the IVR calling campaign.

4 25. Predictive dialing is a computerized method for automatically dialing lists of  
5 telephone numbers commonly used in call center operations. Predictive dialing is a type of  
6 automatic telephone dialing as defined by the FCC to make outbound telephone calls for sales,  
7 telemarketing, collections, information surveys or other purposes. Predictive dialing provides the  
8 capability to “predict” the availability of call center agents that can respond to the outbound calls  
9 that have been dialed by the predictive dialing system and answered by the called party.  
10 Prerecorded voice technology may also be used to announce to the called party to wait for a call  
11 center agent to respond. Called parties that answer a predictively dialed outbound call typically  
12 experience a distinctive and recognizable pause due to the time interval during which the call is  
13 redirected back and connected to an available call center agent. In addition, predictive dialing  
14 methods enable a variety of programmatic ways to treat calls that have not been answered by the  
15 called party. As examples, calls that may be answered by voicemail, calls that receive a busy  
16 signal and calls that are not answered, may all be treated and managed differently by the  
17 automatic dialing system. “Predictive” dialing necessarily requires certain algorithmic and  
18 computerized functionality to operate properly. For example, predictive dialing requires the  
19 equipment to perform call progress analysis for each call made to detect ring-back tones, busy  
20 tones and the difference of whether a person, answering machine or voicemail system has  
21 answered a call. Additionally, automatic predictive dialing requires a “pacing” algorithmic  
22 function. Pacing algorithms are the statistical models that perform as the primary function  
23 enabling the automatic dialing system to predict the availability and increase the efficiency of the  
24 call agents. These complex algorithms are based on various factors such as average call time,  
25 number of agents available, number of expected abandoned calls, average number of answering  
26 machines detected, time of day, day of week and many, many other factors.

27 26. Note that the actual *predictive* functionality of predictive dialers occurs *after* the  
28 equipment automatically dials telephone numbers from a list of numbers. Therefore, the

1 automatic telephone dialing function of the equipment, *i.e.*, the ability to automatically dial  
2 telephone numbers from a list of numbers, occurs prior to the call being connected and  
3 *predictively* redirected back to an available call center agent. Thus, predictive dialing is identical  
4 to basic automatic dialing with the addition of the automated capability of connecting the called  
5 party back to an algorithmically predicted call center agent.

6 27. Unattended message dialing (sometimes known as a “message blast” or a “phone  
7 blast”) is a computerized method for automatically dialing electronic lists of telephone numbers  
8 with the intent to only transmit a prerecorded voice message to the called parties once the call is  
9 answered. If an answering machine or voicemail system answers the call, the prerecorded voice  
10 message can be left as a recording for the called party to listen to later. No call center agents are  
11 required and there are no inbound calls to the system. Unattended message calls are always  
12 outbound, from an automatic telephone dialing system to a stored electronic list of telephone  
13 numbers. The prerecorded voice message is recorded before the calling campaign is executed  
14 and is stored in an audio file that is automatically played when the call is answered.

15 28. Manual dialing, performed through an automatic dialing system, is a computerized  
16 method for automatically dialing electronic lists of telephone numbers. Although automatic  
17 dialing systems may use the term “manual” dialing, there is still programmatic control and  
18 automatic functionality to perform the actual dialing process. When manual dialing is used, each  
19 individual call center agent has the ability to originate a call in typically two ways. Using the first  
20 method, the call center agent can enter the individual digits of a full 10-digit telephone number  
21 for an account to be called. The entered digits are sent as a message into the automatic dialing  
22 system to be subsequently dialed by the system. Using the second method, the call center agent  
23 can “invoke” the automatic sending of all the individual digits of the telephone number into the  
24 system at one time without entering the individual digits. The telephone number to be called may  
25 be displayed on the computer screen and the call center agent sends the digits into the automatic  
26 dialing system by clicking the displayed number itself or, for example, by clicking a “submit”  
27 button for the displayed telephone number. This sends a message containing the entire telephone  
28 number into the automatic dialing system to be subsequently dialed by the system. Furthermore,

1 since manual dialing still has automatic functionality, the types of calls and the digits that can be  
2 entered by a call center agent are entirely programmable within the dialing system.

3 29. Both basic and predictive automatic dialing require the equipment to perform *call*  
4 *progress analysis* for each automatically initiated call. Call progress analysis automatically  
5 detects ring-back tones, busy tones, fast-busy tones, special information tones, answering  
6 machines, voicemail systems, a person answering a call, etc. The equipment itself essentially  
7 *listens* to the initiated call that is in progress and can be programmed to act in a particular way  
8 depending on the result of the call attempt. Call progress analysis capability is a key  
9 characteristic of automatic telephone dialing systems. The presence of this function is inherent in  
10 the process of automatic dialing and clearly implies the capability of the equipment to  
11 automatically dial telephone numbers. This is because the functional process to analyze call  
12 progress tones is established prior to the process of electronically signaling out (*i.e.*, dialing) the  
13 ten digits of a telephone number. Computerized call progress analysis is inextricably tied to the  
14 process of automatic electronic dialing.

15 30. Additionally, unattended message dialing, predictive dialing and basic automatic  
16 dialing can use prerecorded voice technology to leave a message on an answering machine or a  
17 voicemail system if a person does not answer the call. This function, of course, is based on the  
18 ability of the equipment to perform call progress analysis, so different prerecorded messages can  
19 be left when the automatic dialing system detects a person answering versus a voicemail system  
20 answering. For example, prerecorded voice technology can be used for predictive dialing to  
21 announce to the called party to wait on the line for a call center agent to respond or to leave a  
22 prerecorded message on an answering machine.

23 31. These types of computerized dialing (*i.e.*, preview, basic, predictive, unattended  
24 message and manual dialing) require the automatic system to store telephone numbers to be  
25 called. The numbers stored electronically are automatically and directly dialed by the dialing  
26 system equipment. The list of telephone numbers to be called by the equipment is made available  
27 to the dialing system as part of setting up each call or calling campaign.  
28

## **THE TCPA AND AUTOMATIC TELEPHONE DIALING SYSTEMS**

32. For ease of reference, this section simply presents the TCPA and FCC definitions that I understand, from Plaintiff's attorneys, to be the most applicable to my analysis in this case.

33. The TCPA defines an ATDS as "equipment which has the capacity— (i) to store or produce telephone numbers to be called, using a random or sequential number generator; and (ii) to dial such numbers." *See* 47 U.S.C. § 227(a)(1).

34. In the FCC's Report and Order of July 3, 2003, 18 FCC Rcd. 14014 (2003), the Commission stated the following:

"The statutory definition contemplates autodialing equipment that either stores or produces numbers. It also provides that, in order to be considered an 'automatic telephone dialing system,' the equipment need only have the '*capacity* to store or produce telephone numbers (emphasis added)...' It is clear from the statutory language and the legislative history that Congress anticipated that the FCC, under its TCPA rulemaking authority, might need to consider changes in technologies. In the past, telemarketers may have used dialing equipment to create and dial 10-digit telephone numbers arbitrarily. As one commenter points out, the evolution of the teleservices industry has progressed to the point where using lists of numbers is far more cost effective. The basic function of such equipment, however, has not changed—the capacity to dial numbers without human intervention. We fully expect automated dialing technology to continue to develop." (¶ 132.)

"[T]o exclude from these restrictions equipment that use predictive dialing software from the definition of 'automated telephone dialing equipment' simply because it relies on a given set of numbers would lead to an unintended result. Calls to emergency numbers, health care facilities, and wireless numbers would be permissible when the dialing equipment is paired with predictive dialing software and a database of numbers, but prohibited when the equipment operates independently of such lists and software packages. We believe the purpose of the requirement that equipment have the "capacity to store or produce telephone numbers to be called" is to ensure that the prohibition on autodialed calls not be circumvented. Therefore, the Commission finds that a predictive dialer falls within the meaning and statutory definition of 'automatic telephone dialing equipment' and the intent of Congress." (¶ 133.)

35. The FCC's Report and Order of January 4, 2008, 23 FCC Rcd. 559 (2008), stated the following:

1 “The commission noted that the evolution of the teleservices industry  
2 had progressed to the point where dialing lists of numbers was far  
3 more cost effective, but that the basic function of such dialing  
4 equipment, had not changed—the capacity to dial numbers without  
5 human intervention. The Commission noted that it expected such  
6 automated dialing technology to continue to develop and that Congress  
7 had clearly anticipated that the FCC might need to consider changes in  
8 technology.” (¶ 13.)

9 “...calls to emergency numbers, health care facilities, and wireless  
10 numbers are permissible when the dialing equipment is paired with  
11 predictive dialing software and a database of numbers, but prohibited  
12 when the equipment operates independently of such lists, would be  
13 inconsistent with the avowed purpose of the TCPA and the intent of  
14 Congress in protecting consumers from such calls.” (¶ 14.)

15 36. In the FCC’s Notice of Proposed Rulemaking of May 22, 2012, the Commission  
16 stated the following:

17 “Under the TCPA, the term “automatic telephone dialing system” is  
18 defined as ‘equipment which has the capacity– (A) to store or produce  
19 telephone numbers to be called, using a random or sequential number  
20 generator; and (B) to dial such numbers.’ Id. at § 227(a)(1). The  
21 Commission has emphasized that this definition covers any equipment  
22 that has the specified capacity to generate numbers and dial them  
23 without human intervention whether or not the numbers called are  
24 randomly or sequentially generated or come from calling lists.” (p.4,  
25 footnote 12.)

26 37. In the FCC Declaratory Ruling and Order of July 10, 2015, 30 FCC Rcd. 7961  
27 (2015), the Commission stated the following:

28 “We reaffirm our previous statements that dialing equipment generally  
has the capacity to store or produce, and dial random or sequential  
numbers (and thus meets the TCPA’s definition of ‘autodialer’) even if  
it is not presently used for that purpose, including when the caller is  
calling a set list of consumers. We also reiterate that predictive dialers,  
as previously described by the Commission, satisfy the TCPA’s  
definition of ‘autodialer’ for the same reason. We also find that callers  
cannot avoid obtaining consent by dividing ownership of pieces of  
dialing equipment that work in concert among multiple entities.” (¶  
10.)

“The Commission declined to distinguish between calls to wireless  
telephone numbers made by dialing equipment ‘paired with predictive  
dialing software and a database of numbers’ and calls made ‘when the

equipment operates independently of such lists and software packages.’ Recognizing the developments in calling technology, the Commission found that ‘[t]he basic function of such equipment, however, has not changed—the capacity to dial numbers without human intervention.’ The Commission found it troubling that predictive dialers, like dialers that utilize random or sequential numbers instead of a list of numbers, retain the capacity to dial thousands of numbers in a short period of time and that construing the autodialer definition to exclude predictive dialers could harm public safety by allowing such equipment to be used to place potentially large numbers of non-emergency calls to emergency numbers, a result the TCPA was intended to prevent. The Commission concluded that the TCPA’s unqualified use of the term ‘capacity’ was intended to prevent circumvention of the restriction on making autodialed calls to wireless phones and emergency numbers and found that “a predictive dialer falls within the meaning and statutory definition of ‘automatic telephone dialing equipment’ and the intent of Congress.” (§ 14.)

38. Furthermore, in the same Declaratory Ruling and Order, the commission stated:

“We also find that parties cannot circumvent the TCPA by dividing ownership of dialing equipment. (§ 23.)

“We conclude that such equipment can be deemed an autodialer if the net result of such voluntary combination enables the equipment to have the capacity to store or produce telephone numbers to be called, using a random or sequential number generator, and to dial such numbers. The fact that two separate entities have voluntarily entered into an agreement to provide such functionality does not alter the analysis... As a result, the Commission has recognized that various pieces of different equipment and software can be combined to form an autodialer, as contemplated by the TCPA. The fact that these individual pieces of equipment and software might be separately owned does not change this analysis.” (§ 24.)

### **INTERACTIVE VOICE RESPONSE (“IVR”) SYSTEMS**

39. An IVR system, when used as an integral part of an outbound telephone dialing campaign and as described above, can be deployed as a function of basic (or “progressive”) automatic telephone dialing and predictive dialing. Outbound calling campaigns using IVR technology are usually designed to play a prerecorded voice message regardless of whether a live person answers the call or a voicemail system or answering machine answers the call. In addition, in these cases, different prerecorded voice messages can be programmed to be played.



1 For example, if a live person answers, the prerecorded voice message may announce choices to  
2 be electronically selected by the person. If a voicemail system answers and is detected,  
3 announcing such choices would be useless. Furthermore, if a live person answers, electronically  
4 selecting a particular service may cause the call to be predictively redirected back to a call center  
5 agent in a particular department associated with the person's selection.

6 40. IVR systems are used in automatic outbound calling campaigns to initiate  
7 communications with consumers for various reasons, for example: when the same prerecorded  
8 voice announcement is designed to be sent *en masse* to consumers when a dialog with the calling  
9 party is not required (*i.e.*, unattended message dialing); when a dialog with the calling party is  
10 required but call center agents for predictively dialed calls are dedicated to particular services  
11 based on a selection provided by the consumer (*i.e.*, attended message dialing), and; when a  
12 dialog with the calling party is required but the consumer is not expected to either answer or  
13 engage in a dialog, *i.e.*, consumers are expected to abandon the calls if answered, such as for debt  
14 collections. In this case, the calling party realizes outbound dialing efficiencies by conveying the  
15 voice message to the consumer informing them of the need to talk while simultaneously  
16 minimizing abandoned live calls with agents.

17 41. The ability of a dialing system to deliver (*i.e.*, play) a prerecorded voice message at  
18 the beginning of a particular outbound call, as previously described, is dependent on the ability  
19 of the dialing system to analyze call progress tones for that call. Therefore, if a prerecorded voice  
20 message is played when an outbound call is answered, the call must be an automatically dialed  
21 call. Furthermore, when a prerecorded message is played at the beginning of an outbound call,  
22 the automatic dialing system must transfer the call back to an agent in order for there to be a  
23 dialog between the consumer and the call center agent—the fundamental function of predictive  
24 dialers.

25 42. In many cases, the automatic IVR dialing campaigns for both unattended and  
26 attended outbound message dialing use telephone numbers that are stored in a separate account  
27 record database. These telephone numbers can be electronically imported into the IVR function  
28 directly and automatically from the account record database or they can be extracted from the



1 account record database and electronically imported into the IVR function as separate exercises.  
2 In either case, both unattended and attended outbound message dialing can only function if  
3 telephone numbers to be called are dialed *en masse* from a stored electronic list of numbers;  
4 otherwise, the efficiencies of using an IVR system to initiate outbound calls cannot be realized.

5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]

10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]

18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]

22 [REDACTED]  
23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]  
26 [REDACTED]

27 47. Furthermore, it is my understanding that in a previous case TWC's IVR system was  
28 determined to be an ATDS within the meaning of the TCPA. (Exhibit C.) In a deposition

1 transcript from that case, a corporate fact witness clearly described how TWC's IVR system  
2 functioned—identical to the unattended message dialing function. (Exhibit D.) Nothing in the  
3 IVR record produced by TWC indicates that the IVR system in this case is different than the IVR  
4 system in the King case.

5 48. Therefore, it is my opinion, based on my knowledge, education, experience,  
6 expertise, training, my review of the relevant documents and the facts described above that

7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]

#### 24 ECLERX'S DIALING SYSTEM

25 52. I understand that eClerx is a professional outsourcing company that offers call  
26 center services. EClerx provides outsourced technical support and troubleshooting call center  
27 services to TWC. I understand that fact discovery in this case is ongoing and I also understand  
28 that there may be documents and/or evidence that have yet to be produced regarding the dialing

1 system employed by eClerx when providing their call center services. When the appropriate and  
2 detailed technical documentation and evidence is made available, I will provide my conclusions  
3 and opinions on whether or not eClerx employed and utilized an ATDS as defined in the TCPA.

#### 4 **THE NOBELBIZ DIALING SYSTEM**

5 53. I understand that NobelBiz provides hosted cloud-based software dialing services. I  
6 understand that fact discovery in this case is ongoing and I also understand that there may be  
7 documents and/or evidence that have yet to be produced regarding the NobelBiz dialing system.  
8 When the appropriate and detailed technical documentation and evidence is made available, I  
9 will provide my conclusions and opinions on whether or not the NobelBiz dialing system  
10 qualifies as an ATDS as defined in the TCPA.

#### 11 **INFOCISION**

12 54. I understand that InfoCision Management Corporation (“InfoCision”) provides  
13 direct marketing services to its clients. Evidence has been produced that InfoCision employs at  
14 least the NobelBiz dialing system.

15 55. I understand that fact discovery in this case is ongoing and I also understand that  
16 there may be documents and/or evidence that have yet to be produced regarding the dialing  
17 systems employed by InfoCision. When the appropriate and detailed technical documentation  
18 and evidence is made available, I will provide my conclusions and opinions on whether or not  
19 the dialing systems employed by InfoCision qualify as an ATDS as defined in the TCPA.

#### 20 **THE MERIDIAN AND GOOGLE VOICE DIALING SYSTEM**

21 56. I understand that Meridian Cable Strategies Inc. (“Meridian”) provides outsourced  
22 call center services for delinquent accounts to cable companies. Meridian, using Google Voice,  
23 provides outsourced account management services to TWC. I understand that fact discovery in  
24 this case is ongoing and I also understand that there may be documents and/or evidence that have  
25 yet to be produced regarding the Meridian and Google combined dialing system. When the  
26 appropriate and detailed technical documentation and evidence is made available, I will provide  
27 my conclusions and opinions on whether or not the Meridian and Google dialing system qualifies  
28 as an ATDS as defined in the TCPA.

1                   **DETERMINING LANDLINE AND CELLULAR TELEPHONE NUMBERS**

2           57.     Nearly 50% of all households in the U.S. today exclusively use cell phones.  
3     Cellular telephone numbers are often used as home, residential, business or other numbers and  
4     are subsequently designated as such on forms and other records. Due to the inherent unreliability  
5     of these forms and records as the guiding information for making automated outbound telephone  
6     calls, most telemarketers use a highly reliable and inexpensive technology solution that has been  
7     available to them for well over a decade.

8           58.     In November, 2003, the FCC mandated the implementation of a service known as  
9     “number portability” to be offered by both landline and cellular common carriers to all landline  
10    and cellular subscribers. Specifically, the service is characterized by two features: Local Number  
11    Portability (“LNP”) and Wireless Local Number Portability (“WLNP”). LNP enables cellular  
12    subscribers to “port,” or transfer, their cellular telephone numbers from a cellular carrier to a  
13    landline carrier within a defined geographic local area to essentially become home landline  
14    telephone numbers and vice versa. WLNP enables cellular subscribers to “port,” or transfer, their  
15    cellular telephone numbers from one cellular carrier to another, allowing them to essentially own  
16    their telephone number regardless of which cellular carrier they wish to subscribe to.

17          59.     Because of number portability, there is no distinguishing characteristic within the  
18    telephone number format and the value of the digits themselves to determine which carrier  
19    services a particular telephone number and whether the number is even a landline or cellular  
20    number. The standard numbering plan in the United States for both landline and cellular  
21    telephone numbers is the ten-digit number format: “NPA-NXX-XXXX.” “NPA” refers to the  
22    Numbering Plan Area, more commonly known as the three-digit “area code.” The NPA is also of  
23    the format “NXX.” The entire format of the number, “NXX-NXX-XXXX” refers to a numbering  
24    plan where the digit “N” can be any number from 2 through 9 and the digit “X” can be any  
25    number from 0 through 9.

26          60.     If a subscriber wishes to port his or her landline telephone number to a cellular  
27    telephone number, or vice versa, or their telephone number to another competing landline or  
28    cellular carrier, the carrier is required to do so within a few hours or less. To do this, all of the

1 landline and cellular carriers are connected to a nationwide real-time number portability  
2 database. The primary number portability database is owned, operated and maintained by an  
3 independent company known as ©Telcordia Technologies, Inc. dba “iconectiv.”<sup>1</sup> Because of  
4 the FCC mandate for number portability among all common carriers, a centralized real-time  
5 telephone number portability database needs to be employed for any and all telephone calls to be  
6 completed to the appropriate carrier network.

7 61. The number portability database essentially associates each and every telephone  
8 number with a landline or cellular carrier network identifier, enabling calls to be made to the  
9 proper landline or cellular carrier network. During the course of establishing each and every  
10 telephone call and to deliver those calls to the proper network servicing the called party numbers,  
11 the number portability database is queried in real-time so that calls can terminate in the proper  
12 carrier network and properly delivered to the called party. Due to the critical nature of this  
13 service, reliability of iconectiv’s database is among the highest in the telecommunications  
14 industry.

15 62. Iconectiv, as well as other information services companies that provide wholesale  
16 access to iconectiv’s database, is commonly employed by telemarketing companies to analyze  
17 databases or lists of telephone numbers prior to calling them using an automatic telephone  
18 dialing system. Iconectiv and its client wholesalers lease and maintain access to the number  
19 portability database enabling organizations to definitively know whether any telephone numbers  
20 in a list of numbers are cellular or not. I have personally been involved with contracting these  
21 organizations to obtain this telephone number data, both for wireless network products I have  
22 designed and in many TCPA cases.

23 63. Telephone numbers included in account records being serviced by telemarketers are  
24 typically “scrubbed” by either iconectiv or its client wholesalers to determine which ones are  
25 cellular telephone numbers prior to being added to a campaign of numbers to be called by an  
26 automatic telephone dialing system. “Scrubbing” is a term used to describe a process by which a  
27 list of telephone numbers is compared against another list of telephone numbers having  
28

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<sup>1</sup>See <http://www.iconectiv.com/numbering/number-portability-administration-center-npac>.

1 additional parameters associated with those numbers. If a telephone number is determined to be a  
2 cellular telephone number by this “scrubbing” process, it can be treated appropriately and in  
3 accordance with all local, state and federal statutes and regulations. For example, organizations  
4 need to recognize whether a telephone number is a landline or cellular number, and treat them  
5 appropriately so that they do not initiate automatic calls in potential violation of the TCPA.

6 64. Based on my knowledge, education, experience, expertise and training, it is my  
7 opinion that consumers’ telephone numbers can be definitively and clearly determined to be  
8 either cellular or landline numbers. Furthermore, the ability to do so is an inexpensive and  
9 straightforward administrative process commonly used in the telemarketing industry. Therefore,  
10 the Defendant certainly has the ability to subscribe to iconnectiv’s number portability database to  
11 avoid calling cellular telephone numbers using an automatic telephone dialing system.

#### 12 **DETERMINING REASSIGNED NUMBERS**

13 65. Telephone number recycling is a common occurrence in the cellular  
14 telecommunications industry. It results when a unique telephone number previously used for  
15 telephone services is relinquished from one party and *reassigned* to another party. Telephone  
16 numbers are a finite resource. As such, carriers commonly take telephone numbers that were  
17 previously used and assign them to new subscriptions. This is partly due to the large number of  
18 prepaid subscribers that have a high rate of transience as well as aggressive competition among  
19 the cellular carriers for both prepaid and postpaid subscribers that no longer wish to keep their  
20 numbers. Numbers that were previously used as either landline or cellular telephone numbers can  
21 be assigned to new cellular telephone subscriptions.

22 66. Telephone number recycling takes place, for example, when a person stops using  
23 telephone services and discontinues payment to the carrier; when a person obtains a new  
24 telephone subscription with a new number replacing the old one; when a person using a number  
25 is delinquent in paying for telephone services and is subsequently shut off, and; various other  
26 circumstances whereby a telephone number is taken out of service and reassigned to a new  
27 service. Thus, it is incumbent upon telemarketers and debt collection servicers using automated  
28 telephone dialing systems to ensure that they are calling the proper individuals, especially in the

1 event the numbers on file for those individuals were reassigned to other people.

2 67. There exist commercially available third-party information service companies that  
3 maintain telephone number recycling data. One such company, Early Warning Services, LLC<sup>2</sup>  
4 (“Early Warning”), maintains proprietary connectivity to the telecommunications carriers in  
5 order to provide its Mobile Number Verification service. To support this service, Early Warning  
6 maintains a database that is populated daily with telephone numbers that have been relinquished  
7 that day. (Exhibit F.)

8 68. The Mobile Number Verification service enables organizations to query the  
9 database in real-time or in batch mode prior to calling individuals. The service returns a number  
10 match or mismatch indicator based on changes to the telephone subscription since the last date  
11 the organization called the individual and the network status of the number, if deactivated or  
12 suspended. If the response returned is a “number match,” then the organization can call that  
13 number and be assured that they are calling the proper party. If the response returned is a  
14 “number mismatch,” then the organization can refrain from making an outbound call to an  
15 outdated number or one that is out of service. This solution was also presented in testimony to  
16 the Senate Committee on Commerce, Science & Transportation in May, 2016. (Exhibit G, pp.  
17 23-25.)

18 69. Based on my knowledge, education, experience, expertise and training, it is my  
19 opinion that telephone numbers can be definitively and clearly determined to have been  
20 reassigned since the last time those numbers were called. Furthermore, the ability to do so is a  
21 straightforward administrative process commonly used in the telemarketing industry to prevent  
22 automatic dialing of reassigned numbers. I have not seen any evidence that TWC subscribed to  
23 such a service.

#### 24 ASCERTAINABILITY

25 70. I understand that TWC has recorded account information associated with the  
26 telephone numbers of consumers who were called for technical support, account delinquency or  
27 other reasons. Typically, this account information includes the person’s name, address and  
28

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<sup>2</sup>See <https://www.earlywarning.com/mobile-number-verification.html>.

1 possibly email address.

2 71. In the case where this information is non-existent, reliable contact information can  
3 be ascertained based solely on the telephone number called. There exist commercially available  
4 third-party information service companies that collect, maintain and analyze telephone number  
5 data for various commercial information purposes. Beside analyzing whether telephone numbers  
6 are cellular numbers or landline numbers, these information service companies also provide  
7 various class action administration and litigation support services.

8 72. I have personal and technical experience with some of these third-party information  
9 service companies such as A.B. Data, Ltd.<sup>3</sup> (“A.B. Data”), Alexander Reus, P.A. dba DRRT, a  
10 limited partner of Diaz Reus & Targ LLP<sup>4</sup> (“DRRT”), CompliancePoint<sup>5</sup> and Contact Center  
11 Compliance Corporation.<sup>6</sup> These organizations either maintain or have access to extensive  
12 databases and also provide data analysis services for litigation support. These companies have  
13 the ability to identify and provide current contact information for individuals based on telephone  
14 numbers as well as other provided account data, if provided.

15 73. These companies have access to a complete and accurate database, updated daily, of  
16 all telephone numbers and related information used in the United States. For each telephone  
17 number in the United States, they access the associated telecommunications carrier, whether the  
18 number is a landline number or cellular number, and the porting history of the telephone number.  
19 In fact, they typically can access this information for any given date or timeframe in the past,  
20 regardless of whether the number was ever ported before or after that date. I have been  
21 personally involved in contracting with these companies to provide telephone number data  
22 analysis in several TCPA class action lawsuits.

23 74. Additionally, these companies partner with several reputable data processors and  
24 vendors such as LexisNexis, Experian Information Solutions, Inc., Nexxa Group Inc., as well as  
25 many others. Using additional information from these data processors, these companies have the  
26

27 <sup>3</sup>See <http://www.ABDataClassAction.com/services/notice-administration>.

28 <sup>4</sup>See <http://DRRT.com/litigation-support>.

<sup>5</sup>See <http://www.CompliancePoint.com>.

<sup>6</sup>See <http://www.DNC.com>.



1 ability to obtain the owner's name of the telephone subscription associated with the telephone  
2 number and the owner's address during the timeframe the subscription was in service.  
3 Furthermore, they can obtain the latest contact information for the owner of the telephone  
4 subscription at some time in the past by using databases provided by the United States Postal  
5 Service ("USPS"). The USPS maintains the National Change of Address database  
6 ("NCOALink"), which is updated daily and contains approximately 160 million change of  
7 address records for the past four years.<sup>7</sup> If current address information is unavailable via the  
8 USPS, A.B. Data can access credit reporting agencies' information or other data to obtain  
9 address information.

10 75. Hence, these companies have the ability to cross-reference individual telephone  
11 number data from various data resources with telephone subscriber data obtained from their  
12 partners, thus revealing names, addresses and current contact information for individuals who  
13 used a particular telephone number during a particular timeframe in the past.

14 76. Furthermore, because of these extensive data analysis capabilities, purported issues  
15 concerning number portability, the recycling of telephone numbers, family plans, business plans  
16 and pre-paid telephone plans are unlikely to affect the ability of companies of this sort to identify  
17 the subscriber of a telephone number within the last four years.

18 **CELLULAR SUBSCRIBERS ALWAYS INCUR CHARGES FOR EACH CALL**

19 77. It is very common in today's cellular market for subscribers to obtain cellular  
20 features and services that are bundled into a variety of single-price rate plans. Where this is the  
21 case, it may be difficult to determine precisely the actual monetary charges to subscribers for  
22 individual cellular telephone calls. This is because these single-priced rate plans may include  
23 unlimited call-time for a single bulk price. Where this is not the case, a cellular subscriber's  
24 phone bill will include an itemized fee for each telephone call both made and received.

25 78. Cellular network operators typically charge for services using rate-plans that  
26 provide subscribers calls in predefined amounts. Call features and services are often times  
27 bundled together and sometimes provided a la carte. In these cases, it is difficult to derive an  
28

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<sup>7</sup>See <http://www.peachtreedata.com/ncoa/>.

1 itemized single fee for sending or receiving a telephone call based on an individual subscriber's  
2 rate-plan. However, cellular subscribers, as the called party, are always charged by the cellular  
3 network operator for receiving calls. A portion of what subscribers pay for their entire cellular  
4 telephone service each month goes toward this service as it does for many "included" features  
5 and services, such as voice-mail, three-way calling and call-forwarding. Cellular network  
6 operators always consider the actual and precise operating cost for carrying calls across their  
7 networks as well as the marketing costs incurred to acquire new subscribers, the cost of *churn*  
8 (*i.e.* the cost of losing subscribers to competing operators and the cost to remove their access to  
9 the network) and the cost for any included features and service calls. The cellular network  
10 operators maintain detailed statistics on subscriber behavior and demographics and can  
11 accurately predict usage of their networks by subscribers of any given rate-plan. The charges  
12 always cover all of a subscriber's features and services regardless of whether these charges are  
13 itemized or not. Although there may not be a direct itemized fee associated for each individual  
14 telephone call, the bundled fees charged to subscribers truly account for the itemized fees that  
15 may otherwise be individually charged. When telephone call traffic increases to the point where  
16 a cellular operator's profit margins decrease for unlimited single-rate bundled pricing plans, the  
17 operator raises the price of these bundled plans and offers alternative plans to account for the loss  
18 in revenue. The revenue obtained by the cellular operators always originates with the cellular  
19 subscriber consumers and the fees charged are always based on the number of telephone calls  
20 subscribers make and receive, regardless of whether these fees are plainly discernable or not in  
21 an itemized list.

## 22 CONCLUSIONS

23 [REDACTED]  
24 [REDACTED]  
25 [REDACTED]  
26 81. In a previous case (King), TWC's IVR system had been determined to be an ATDS.  
27 Nothing in the record produced by TWC indicates that the IVR system in this case is different  
28 than the IVR system in the King case.

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED]  
20 [REDACTED]

21 86. Telephone numbers can be determined to be either cellular or landline numbers  
22 using a straightforward administrative process.

23 87. Telephone numbers can be determined to have been reassigned since the last time  
24 they were called using a straightforward administrative process.

25 88. Current contact information can be definitively ascertained based on the account  
26 record information stored by TWC.  
27  
28

**SUMMARY OF OPINIONS**

89. It is my opinion, based on my knowledge, education, experience, expertise, training, my review of the relevant documents and the facts described above, that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

90. It is my opinion, based on my knowledge, education, experience, expertise, training, my review of the relevant documents and the facts described above, that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

91. It is my opinion, based on my knowledge, education, experience, expertise, training and the facts described above that telephone numbers can be determined to be either cellular or landline telephone numbers. Furthermore, the ability to do so is a commonly-practiced and straightforward administrative process to prevent automatic dialing of cellular numbers.

92. It is my opinion, based on my knowledge, education, experience, expertise, training and the facts described above that TWC could have determined reassigned customer telephone numbers since the last time they were called. Furthermore, the ability to do so is a commonly-practiced and straightforward administrative process to prevent automatic dialing of reassigned numbers.

93. It is my opinion, based on my knowledge, education, experience, expertise, training and the facts described above that individuals' current contact information can be definitively and clearly ascertained based on the account record information stored by TWC or by other means.

94. It is my opinion, based on my knowledge, education, experience, expertise, training and the facts described above that cellular subscribers always incur charges for each call regardless of the way the subscription service is bundled and even if there are no explicit itemized subscription fees.

Executed in Las Vegas, Nevada, on this 20<sup>th</sup> day of January, 2017.

Randall A. Snyder